

### REMARKS

The Examiner is thanked for the Interview courteously granted to the undersigned in connection with the above-identified application. In attendance at this Interview were also representatives of the assignee of the above-identified application.

During the above-mentioned Interview, various aspects of the present invention, providing advantages for the present invention, were discussed. In particular, it was pointed out that according to one aspect of the present invention, the substrates are horizontal (for example, the main surface of a semiconductor wafer is horizontal) when transferred by the transfer structure and when supported and/or processed. It was indicated that this provides various advantages, including avoiding additional processing apparatus and processing steps to re-orient the substrates. In addition, by supporting the substrates horizontally, e.g., with the surface which is broad being horizontal, the possibility of damage to substrates supported by a narrow edge can be avoided. Moreover, processing equipment can be reduced in size due to avoiding necessity of re-orienting structure and avoiding, e.g., wafers held on edge.

As another feature of the present invention, it was noted that wafers are, e.g., individually held in one of two lock chambers, independently, and are held with the broad surface horizontal. The load and unload lock chambers can hold a single wafer, so that such chamber can be relatively small, reducing the volume in which a vacuum needs to be provided,

for example.

According to the present invention, the lock chamber inlet and outlet are at a same level, so that the, e.g., wafer can pass therethrough horizontally, simplifying the transfer.

In addition, according to the present invention, the transfer arm in the vacuum transfer chamber can enter both the lock chambers and each processing chamber, to simplify transfer in the vacuum, and such arm can hold the, e.g., wafer with the surface to be processed, or having been processed, held horizontally.

During the Interview, the undersigned also discussed specific prior art documents, as listed in the following:

- (1) U.S. Patent No. 4,923,584 to Bramhall et al., representing structure of Eaton Corporation;
- (2) U.S. Patent No. 4,715,764 to Hutchinson, representing structure of Varian Associates, Inc.; and
- (3) Japanese Patent Document No. 63-153270, particularly the structure therein shown in Fig. 1 thereof, representing structure of ULVAC Corp.

During this Interview, differences between the structure and apparatus according to the present invention and that according to the above-listed prior art documents were also discussed, particularly in light of the aforementioned advantages achieved according to the present invention.

During the aforementioned Interview, it was also indicated to the Examiner that a Preliminary Amendment would be submitted in the above-identified application. Moreover, noting particularly the filing date of the original patent

application the benefit of which is being claimed under 35 USC §120 in the above-identified application, and a desire for earliest issuance of a U.S. patent based upon the above-identified application particularly in view thereof, the Examiner was encouraged to contact the undersigned if any issues remained after examination of the above-identified application, so as to speedily achieve allowance of claims in the above-identified application and achieve earliest possible issuance of a U.S. patent based thereon.

Subsequent to the aforementioned Interview, Applicants have amended their claims, prior to examination of the above-identified application, in order to cancel original claims 1-15 (all of the original claims in the application) without prejudice or disclaimer, and add new claims 16-28 to the application. Of these newly added claims, claims 16, 17 and 19-28 are independent claims, and all of the claims are structure claims, directed to a conveyor system for use in a vacuum processing apparatus, or apparatus for carrying out a method of transferring wafers when processing such wafers, or a vacuum processing apparatus.

Entry of the present amendments, and, subsequently, examination of the above-identified application in due course, are respectfully requested.

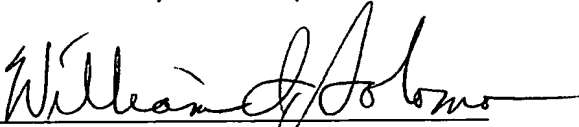
Applicants are submitting concurrently herewith an Information Disclosure Statement in connection with the above-identified application, submitting an additional document for consideration by the Examiner in connection with the above-identified application. In examination of the above-

identified application, it is respectfully requested that this newly cited and submitted document be considered.

To the extent necessary, Applicants petition for an extension of time under 37 CFR § 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Deposit Account No. 01-2135 (Case No. 503.30414V27) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

  
\_\_\_\_\_  
William I. Solomon  
Registration No. 28,565

1300 North Seventeenth Street  
Suite 1800  
Arlington, VA 22209  
Tel.: 703-312-6600  
Fax.: 703-312-6666

WIS:alw